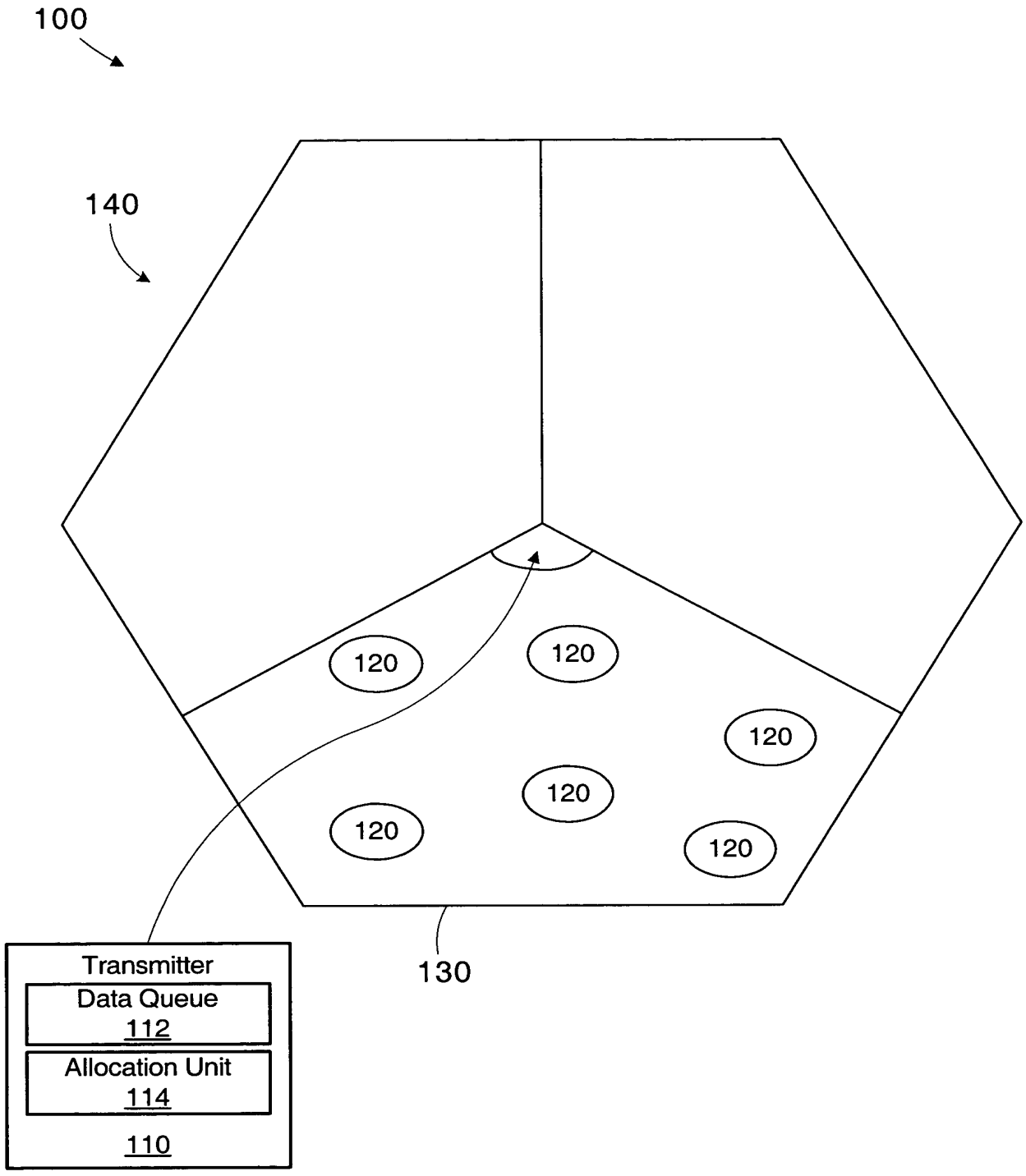
100
140
120
120
120
120
120
120
130
Transmitter
Data Queue
112
Allocation Unit
114
110

Figure 1

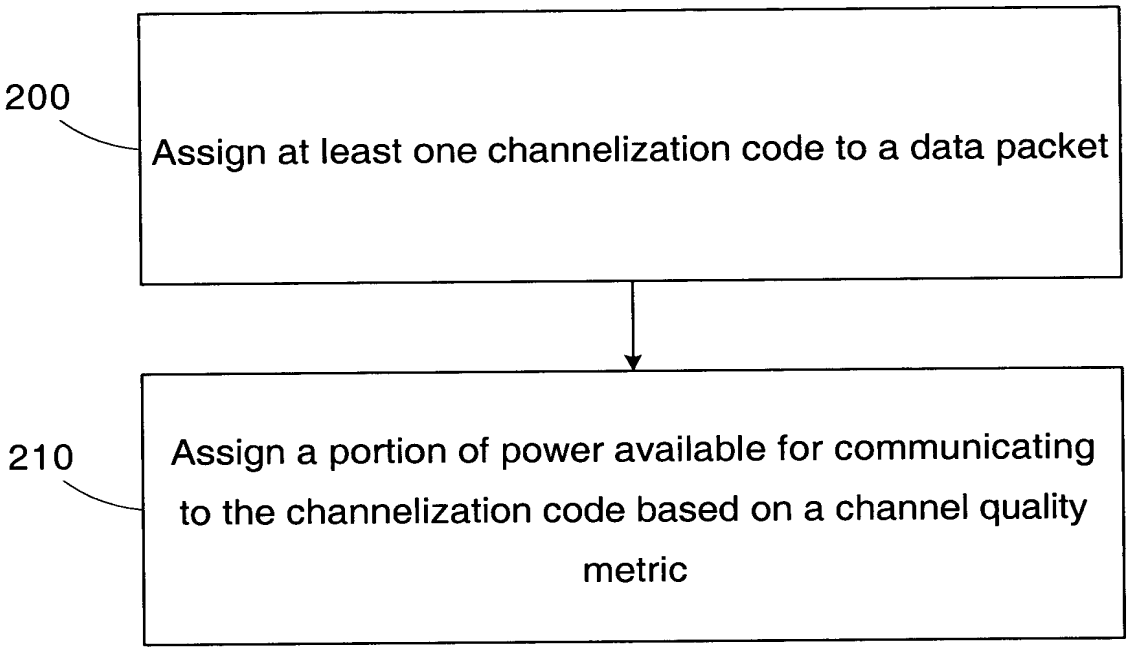
200
Assign at least one channelization code to a data packet
210
Assign a portion of power available for communicating to the channelization code based on a channel quality metric

Figure 2

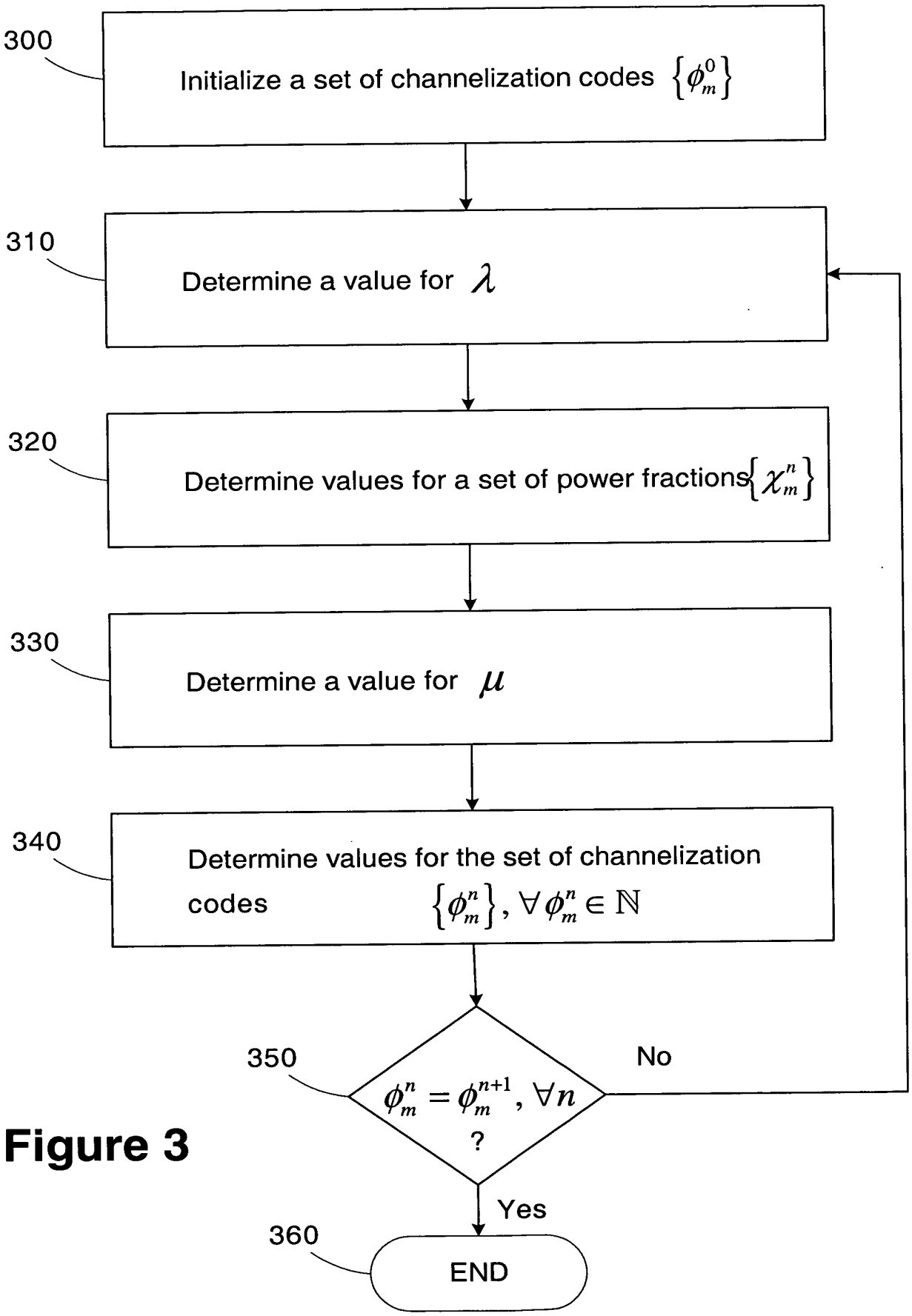
300
Initialize a set of channelization codes $\{\phi_m^0\}$
310
Determine a value for λ
320
Determine values for a set of power fractions $\{\chi_m^n\}$
330
Determine a value for μ
340
Determine values for the set of channelization codes $\{\phi_m^n\}, \forall \phi_m^n \in \mathbb{N}$
350
$\phi_m^n = \phi_m^{n+1}, \forall n$?
No
Yes
360
END

Figure 3

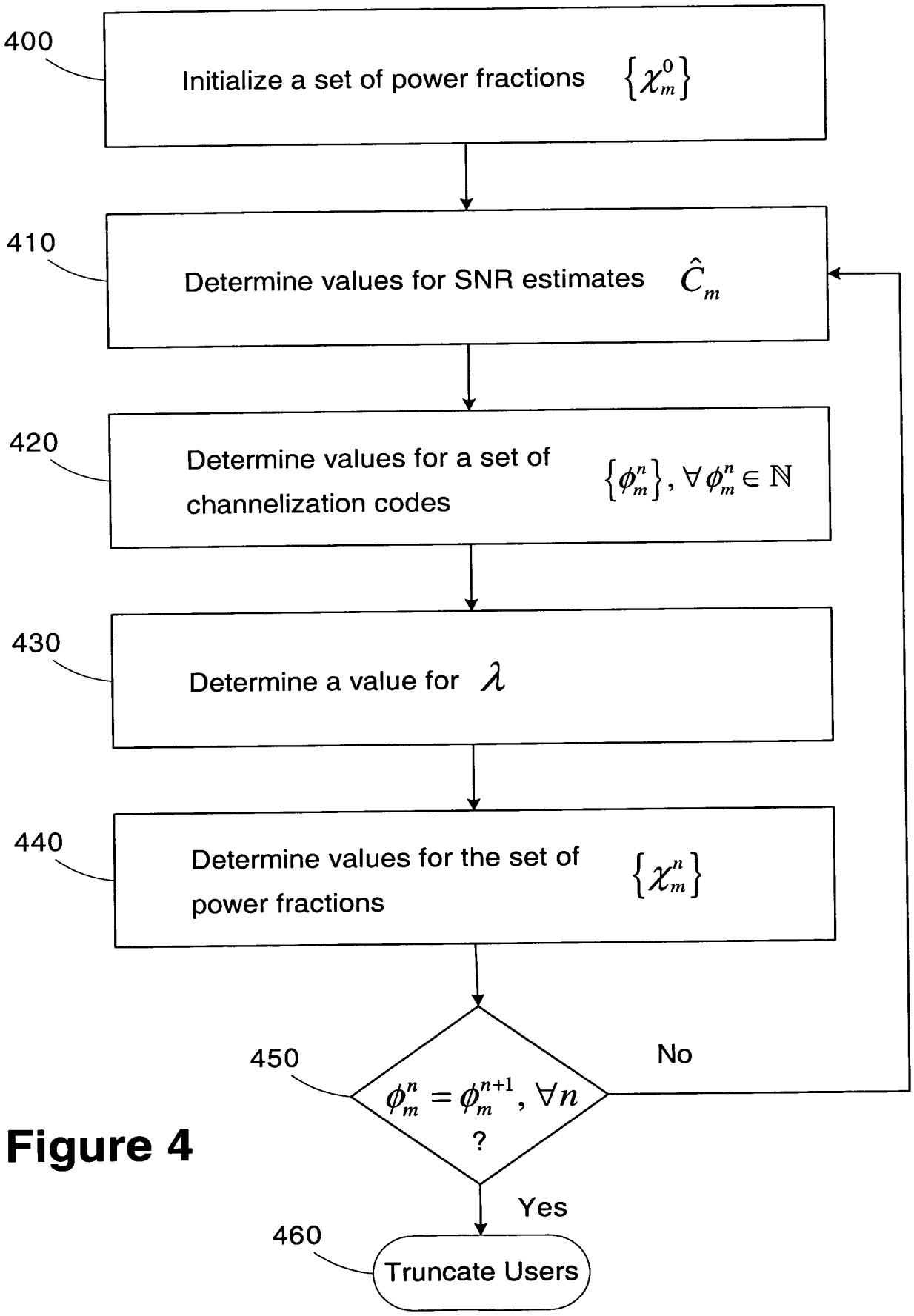
400
Initialize a set of power fractions $\{\chi_m^0\}$
410
Determine values for SNR estimates $\hat{C}_m$
420
Determine values for a set of channelization codes $\{\phi_m^n\}, \forall \phi_m^n \in \mathbb{N}$
430
Determine a value for λ
440
Determine values for the set of power fractions $\{\chi_m^n\}$
450
$\phi_m^n = \phi_m^{n+1}, \forall n$?
No
Yes
460
Truncate Users

Figure 4

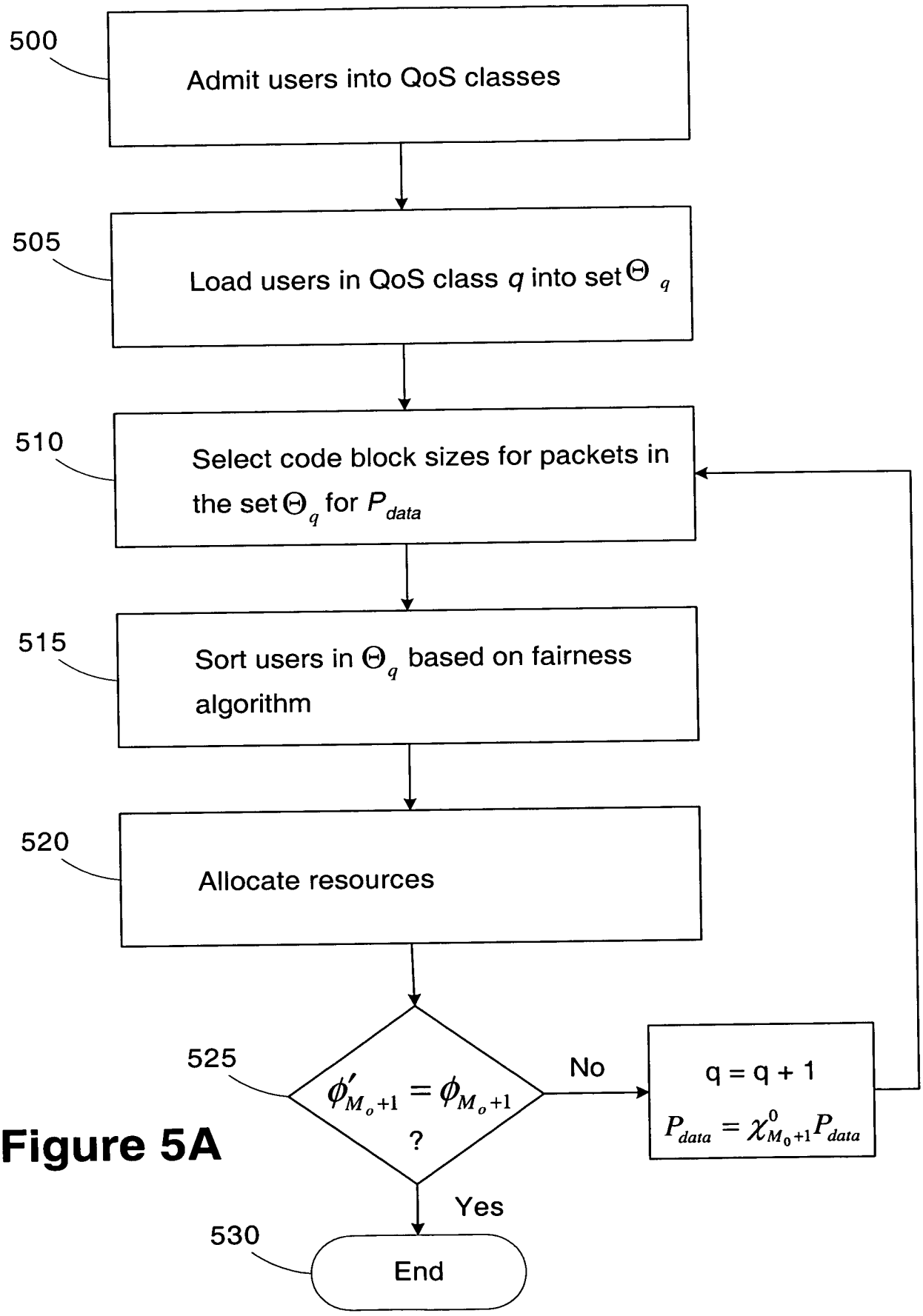
500
Admit users into QoS classes
505
Load users in QoS class q into set Θ_q
510
Select code block sizes for packets in the set Θ_q for P_{data}
515
Sort users in Θ_q based on fairness algorithm
520
Allocate resources
525
$\phi'_{M_o+1} = \phi_{M_o+1}$?
No
q = q + 1
$P_{data} = \chi^0_{M_0+1} P_{data}$
Yes
530
End

Figure 5A

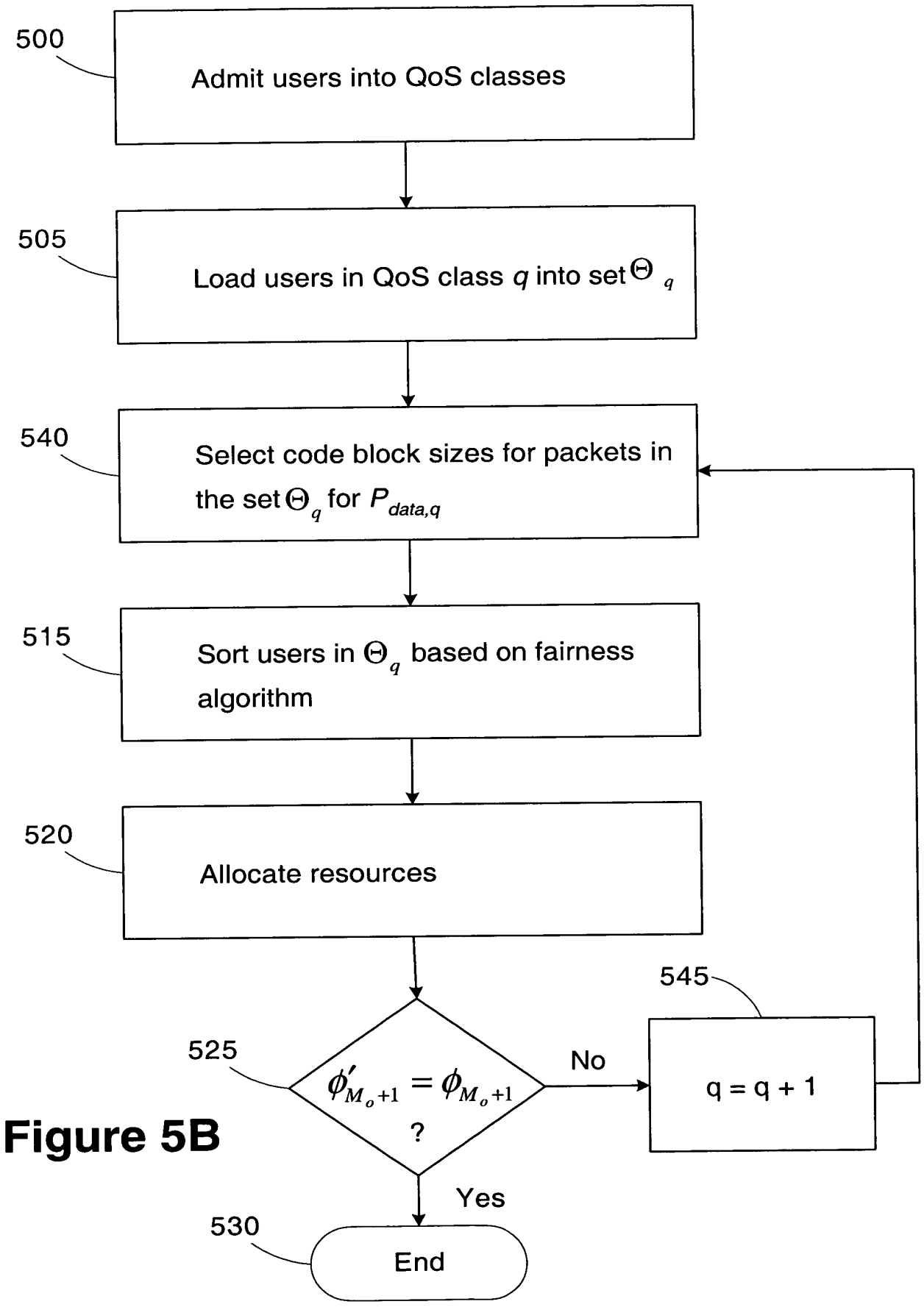
500
Admit users into QoS classes
505
Load users in QoS class q into set Θ_q
540
Select code block sizes for packets in the set Θ_q for $P_{data,q}$
515
Sort users in Θ_q based on fairness algorithm
520
Allocate resources
525
$\phi'_{M_o+1} = \phi_{M_o+1}$?
No
545
q = q + 1
Yes
530
End

Figure 5B

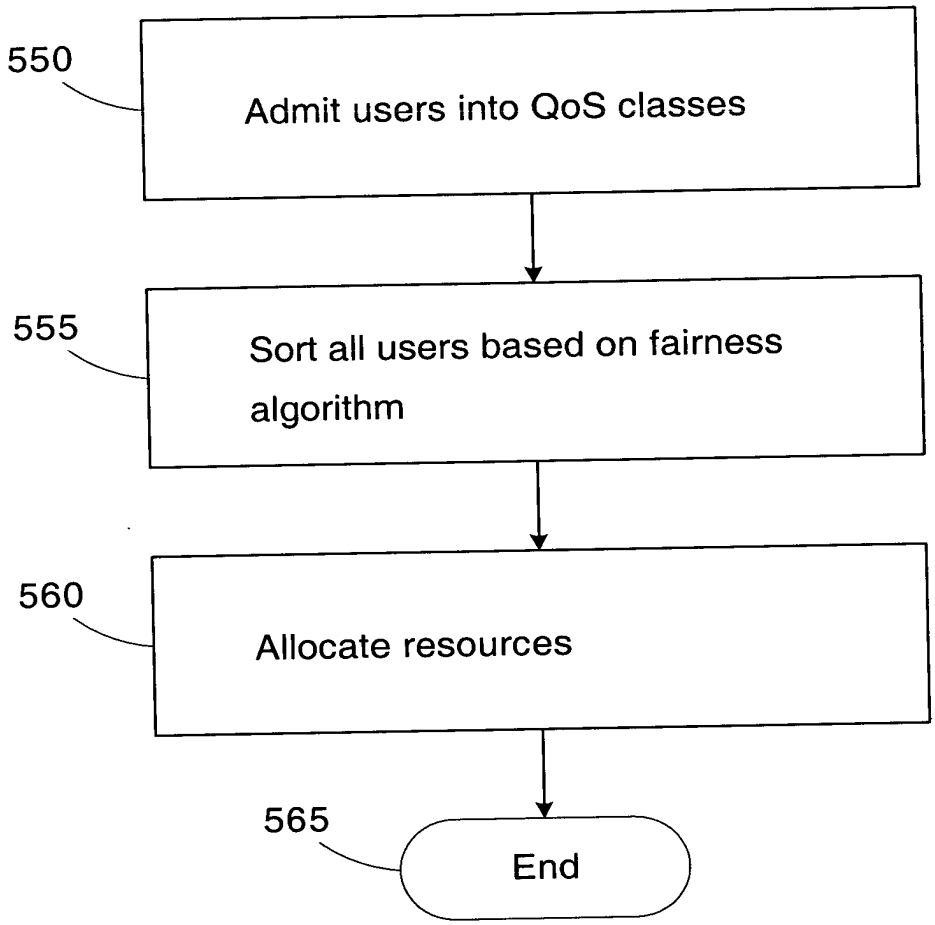
550
Admit users into QoS classes
555
Sort all users based on fairness algorithm
560
Allocate resources
565
End

Figure 5C